Appl. No. 09/913,840 Amdt. dated February 18, 2005 Reply to Office Action of November 19, 2004

- a channel estimator, for compensating the frequency domain vector to produce a compensated frequency domain vector.
- 4. (Original) An OFDM receiver as claimed in claim 1, wherein the output device comprises means for exploiting and cancelling any error control strategies applied in a transmitter of the received signals, and further comprising:

means for reapplying to the output data signal any error control strategies cancelled in the output device.

- 5. (Original) An OFDM receiver as claimed in claim 4, wherein the output device comprises means for deinterleaving the compensated frequency domain vector.
- 6. (Original) An OFDM receiver as claimed in claim 4, wherein the output device comprises means for demapping the compensated frequency domain vector.

ancel

- 7. (Withdrawn) An adaptive decision feedback equalizer, comprising:
- a first input, for a received signal comprising a plurality of symbols, the symbols representing an OFDM signal, each OFDM symbol comprising a plurality of subsymbols per OFDM symbol period;
- a feedforward stage, comprising a first number of taps and corresponding tap coefficients;
- a feedback stage, comprising a second number of taps and corresponding tap coefficients:
- a first buffer, for storing past symbols beyond symbols present in the feedforward stage;
- a second buffer, for storing past symbols beyond symbols present in the feedback stage;
- a correction algorithm processor, for updating tap coefficients of taps in the feedback stage and the feedforward stage at intervals of the OFDM symbol period.

:

- 8. (Withdrawn) A method of adapting coefficients of an adaptive equalizer, the equalizer comprising:
- a first input, for a received signal comprising a plurality of symbols, the symbols representing an OFDM signal, each OFDM symbol comprising a plurality of subsymbols per OFDM symbol period;
- a second input, for receiving a feedback signal comprising an estimate of a transmitted signal;
- a feedforward stage, comprising a first number of taps and corresponding tap coefficients;
- a feedback stage, comprising a second number of taps and corresponding tap coefficients;
- a first buffer, for storing past symbols beyond symbols present in the feedforward stage;
- a second buffer, for storing past symbols beyond symbols present in the feedback stage; and
- a correction algorithm processor, for updating tap coefficients of taps in the feedback stage and the feedforward stage at intervals of the OFDM symbol period, the method comprising:

supplying the feedback signal to the second input once per symbol period; calculating required corrections to the tap coefficients corresponding to intervals of the subsymbol period; and

updating the tap coefficients of the taps at intervals of the OFDM symbol period based on all calculated corrections obtained during each said period.

9. (Withdrawn) A method as claimed in claim 8, further comprising outputting an equalized signal at intervals of the symbol period.